

# INTEGRATING SOFT SKILLS ASSESSMENT THROUGH SOFT SKILLS WORKSHOP PROGRAM FOR ENGINEERING STUDENTS AT UNIVERSITY OF PAHANG: AN ANALYSIS

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## ABSTRACT

*The objective of this paper is to address the need for implementing Soft Skills Workshop that could be an instrumental in developing and improving Soft Skills Program in UMP. The UMP Soft Skills components consist of Positive Values, Leadership, Team Working, Oral Communication, Written Communication, and Learning Capabilities. Hence, the Soft Skills Expert Group at the Centre for Modern Languages & Human Sciences, UMP took the initiative in organizing the Soft Skills 2 Workshop for final year students before they set out for their industrial training. This program was organized to unveil the awareness of employability skills and industrial requirements that should be attained by students in their industrial training as well as for their future career development. Throughout the talk sessions, which based on the modules, group activities and assessments, this workshop aims to instil and nurture the Soft Skills components within the students. A total of 226 final year Engineering students out of 549 were selected as respondents. The study was conducted using survey methods. The descriptive methods of statistical data analysis were utilized. Based on the analysis of the findings, generally it was found that the majority of the respondents were agreed to the implementation process of the Soft Skills workshop. Most of them (more than 50%) stated that the “strongly agree” and “agree” results to all question asked. Thus, this paper addresses a comprehensive and integrated model in fulfilling the needs of final year students as well as stakeholders and governing agencies/bodies in order to produce proficient, expert and well-competent graduates in academic, technical skills and non-technical skills.*

## Keywords

*Technical skills and non-technical skills, Soft Skills (Kemahiran Insaniah), Employability, Industrial Training*

## 1. INTRODUCTION

### 1.1 Background to Soft Skills

Studies by Stanford Research Institute and the Carnegie Mellon Foundation among Fortune 500 CEOs found that 75% of long term job success depended on people skills and only 25% on technical skills. This is true at other levels as well. For effective performance in the workplace, companies need their employees to have not only domain knowledge, technical and analytical skills, but also the skills to deal with the external world of clients, customers, vendors, the government and public and work in a collaborative manner with their colleagues. Even for MBA graduates the annual rankings of MBA colleges often place communication and interpersonal skills as the most critical skills needed for success in the corporate world. Noted academic Prof. Henry Mintzberg while speaking on the importance of soft skills for MBAs, refers to the crucial soft skills- leadership, teamwork, communication, and the ability to think outside the box of a discipline-that separate the best from the rest in the management world. Accountant also need soft skills-

Mayurkumar Dadewar an ERP consultant with Price water house Coopers says Soft Skills are very important in business. It is essential to be technically sound, but one should also have ability to convey the idea to the masses in the simplest possible manner. In the UK and India financial services firms are facing a skills crisis, according to a report from KPMG. The report, global skills for Graduates in Financial Services”. Found that a soft skills gap is increasingly apparent because of the development of graduates with excellent technical knowledge, but who lack soft business skills (Maya Khemlani David, 2007). What it is important to emphasize is that soft skills are required not only for established CEOs but even for first time entrants to the job market. In fact, soft skills are of the essence for new employees. A recent survey from Office team has revealed that soft skills rather than technical skills are often valued more by new employers. The survey involved more than 3000 administrative professionals and 400 human resource manager ([www.officeteam.com](http://www.officeteam.com)). Soft skills encompass a number of attributes. The following skills are those most valued by the employers in the survey.

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| Skills Valued by the Employers | %  |
|--------------------------------|----|
| Organizational skills          | 87 |
| Verbal communication           | 81 |
| Teamwork and collaboration     | 78 |
| Problem solving                | 60 |
| Tact and diplomacy             | 59 |
| Business writing               | 48 |
| Analytical skills              | 45 |

### 1.2 Definition of Soft Skills

Soft Skills are skills that are outside a person's job description. They can include personality, characteristics, ethics and attitudes. In addition, soft skills include interpersonal skills such as written and verbal communication, sales and presentation skills and leadership skills. They include time and resource management skills including drive, focus, decision making, planning, execution, dealing with task overload as well as self and team evaluation and improvement. Soft skills benefit everyone in the organization (Che An Abdul Ghani et al., 2007). For example, studies have shown that doctors with better interpersonal skills are sued less (without respect to their technical skills). Sales people who are more liked produce more knowledgeable counterparts. Science, engineering and IT professionals with well developed soft skills get farther in organizations than equally or greater skilled associates who lack good soft skills. Business need professionals who are able to interact with other departments and to communicate effectively with outside organizations. They need people who are self starters, plan, execute, adapt to change and learn from their experiences. They need people who can manage resources and time and bring projects in successfully and on time in spite of obstacles, deadlines and various external pressures.

In short, soft skills refer to the cluster of personality traits, social graces, facility with language, personal habits, friendliness and optimism that mark people to varying degree. Soft Skills complement hard skills, which are the technical requirement of a job. They can be divided responsibility, self-esteem, sociability, self management and integrity, honesty while the latter includes participates as a member of the team, teachers, serves client, customers, exercises leadership, negotiates and work with cultural diversity. The Ministry of Higher Education defines soft skills that complement academic achievement such as positive values, leadership qualities, team working, communication skills and life-long learning. (MOHE, 2006). According to (Jackson, 2005) Soft Skills refers to "a wide variety of basic knowledge, values, and life skills that are necessary to obtain a job and keep it". The other names for Soft Skills which has been listed by Professional Standards Council Australia (Coplin, 2004) are human skills, non-

technical skills, generic skills, essential skills, and employability skills. All these skills are complementary to the technical skills (hard skills) and knowledge that students acquire in the university. The selection literature (Ansari, 1992), (Ibn Qaiyyim & Al Jawziyyah, 1998), (Malik Badri, 2000) provides ample evidence that the true meaning of intelligence skills is connected to cognitive, intellectual, emotional and spiritual domains. According to (Abraham Rebecca, 1999) a research of the impacts of Emotional Intelligence (Soft Skills/non-technical skills) in the workplace, organizational commitment, and organizational citizenship. The results showed that there is positive effects of EQ towards organizational outcomes in following parts; teamwork commitment, the congruence of performance appraisal between self-supervisors, employees performance, organizational commitment and organizational citizenship. It is also able to protect from emotional disorders, role-conflicts, and unsaved task in the workplace. Practically, Universiti Malaysia Pahang (UMP) is introducing Soft Skills Program as early as in semester one until the final semester. The enhancement of human capital with well-rounded personality and necessary skills became the second thrust of the Ninth Malaysia Plan, in which the biggest portion, RM45.1 billion, is allocated to human capital development program.

### 1.3 Developing Human Capital

*The most valuable asset for a country would be the people. The development of human capital and paradigm shift and the way people think have constituted the biggest set of challenges. If we are to step into the economic era without axis on knowledge, if we want to become a developed country and remain there, the human capital development must be prioritised. In the context of the global world, high-quality human capital is a need, and no longer a luxury. The efforts to develop quality human capital will be increased. Approaches to the human capital development must be done holistically, stressing on the development of knowledge, skills, intellectual model including science, technology and entrepreneurship, and also the acculturation of progressive attitude, also high ethics and moral values. This is what we would term human capital with the first-class mind. Three main strategies to produce first-class human capital will be carried out:*

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- *Firstly, To Increase the Capacity and Mastery of Knowledge*
- *Secondly, To Consolidate the Capacity for Science, R&D and Innovation*
- *Thirdly, To Instill a Cultured Community Who Owns Moral Strength*

YAB Dato' Seri Abdullah Ahmad Badawi, Prime Minister of Malaysia

31 March 2006 at the Parliament when presenting the 9th Malaysia Plan

Human capital is an important aspect of sustainable economic growth. It is a way of defining and categorizing people's skills, abilities and knowledge which make labour more productive. The 21<sup>st</sup> century marks a fundamental change in the global economy where the industrial economy makes way for the development of information and knowledge economy. This global economy transformation has witnessed a change in capital activity (Becker, G & Shultz, 1964). Lang was perceived as the most valuable resources, attracting investing capital in an agricultural economy and in the industrial economy, manufacturing plants and machinery were at the focal point of investment activity. In the knowledge economy, the expectation is that the knowledge economy will be an era of human capital with investment in skills, competencies and capabilities of people being the central activity. This means that the knowledge economy will provide a considerable higher level of human development than the industrial economy, for the change in the labour force into knowledge workers would demand a significant expansion in major formal knowledge generating activities. In other words, this change in the global economy will witness a rise in investment in education, training, research and development.

In the light, one key element that will drive the success of present day societies in the global economy in higher education, which will play a pivotal role with respect to their core activities- as producers of new knowledge and also as the disseminators of knowledge which forms human capital with the capacity to innovate. Malaysian higher education today confronts changes as characterized by the global economy. Knowledge, information and culture increasingly inhabit a borderless world. New computer and communication technologies are transforming the way people work, produce and consume. As Malaysia works to position itself in this network of global interactions and changes, higher education will have to adapt to the rapidly changing environment to meet the challenge of building the human capital needed in lifelong and life wide programmes to produce the skills and technological innovations necessary for successful economic and social participation in the global world.

To produce and excellent higher education institution, the education component itself must be

empowered. The focus must be on the effort to enhance the capability of a higher education institution to enable it perform its functions well. The most important aspect that needs to be considered here is empowering the human resources, including those who are involved in the management of the higher education institution. Finally, in view of the effects of globalization which has expanded the role of information technology, there is also a need for the empowerment of information technology in higher education institutions. The November 1988 Concept of Education Reform which is guided by the National Philosophy of Education may still be relevant in discussing the direction to be taken in producing human capital

*When we design our higher education system, not only should we be aware of current needs but we also need to thoroughly examine the forecasts and projections with regard to the flow of the economy and the society in the future against those needs. Appropriate adjustments need to be made not only in terms of training in the use of the new technology but also in terms of making the effort to produce new technologies which are more suited to our worldview and the values of our society. Education must be viewed not only as a process of acquiring the information and competencies to enable us to use new technology but more importantly as a process that can release our nation from the clutches of ignorance. As a free nation and Muslims, our education system must be able to produce people who have the courage to look into the future based on our own perspectives and values, and not based on a view that is imposed upon us. There is no doubt that we have to be realistic and understand the global situation and the reality of interdependences, and that we are a part of the global village. But we need to have the courage to determine out future direction. Rapid changes in the technological world must be seen as a challenge, so that we can think and consequently formulate policies with regard to the use of technology which is situated to those values that we cherish and which can ensure the stability of the environment.*

The above statement written nearly 20 years ago gave emphasis to the effort to produce excellent human being through the country's education system. In the Ninth Malaysian Plan, similar effort involving the development of human capital through education continue to be given attention. This is reflected in the huge allocation of 21 per cent which is given to the development of primary, secondary and higher education and training programmes in the 2007 budget. Education is the means through which

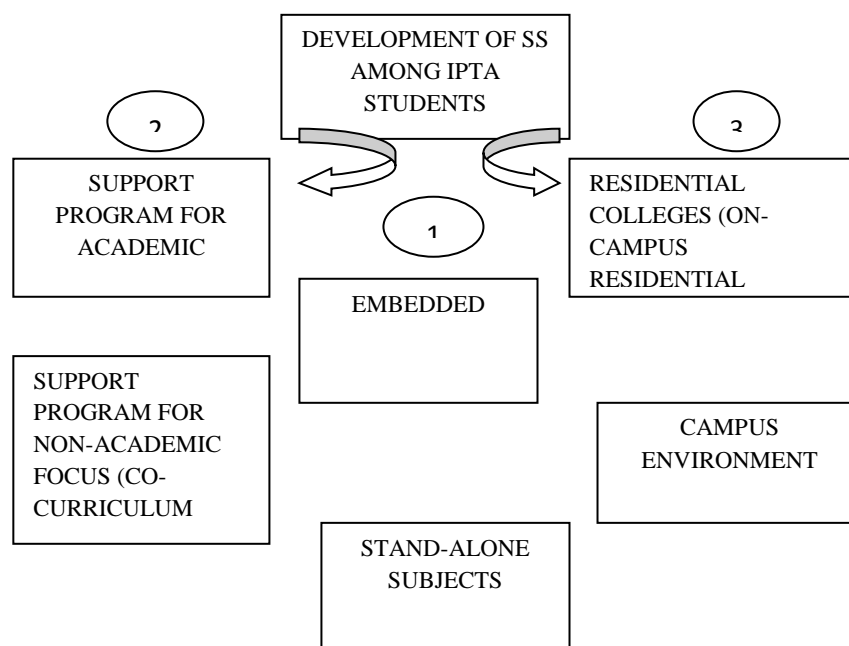
human capital as an asset can be enhanced. In line with future needs of the industry and the market, it is imperative that the development with qualifications in information technology. The success of higher education institution in producing human capital with respect to information technology is heavily dependent upon the quantum of real improvements made to the curriculum and upon the establishment of smart partnership between the higher education institutions and various firms and industries.

In other words, human resource and ICT are important elements in empowering higher education institutions. They play a huge role in enhancing management, education and research effectiveness and efficiency. Besides increasing the number of human capital with such technological skills and increasing the amount of hardware, software, network and training facilities, what is also needed is a policy and comprehensive plan to ensure that the various initiatives involving technology can be undertaken in an effectiveness and efficient manner.

#### 1.4 Roles of Institutes of Higher Learning

Institutes of higher Learning are the final transit in the education cycle before and individual steps into the career world. These institutes provide completion to secondary school education and it is not compulsory for every citizen to pursue. These institutes provide education in broader disciplines such as pure sciences, medicine, liberal arts, social sciences and technology. Universities play many roles

in the development of a country. They function as more than academic knowledge provider. Today, they also encompass much more. The public is often unaware of many of a university's broader economic and social contribution to their community, its economy and their own prosperity and quality of life. The university's far-reaching activities touch virtually every aspect of our daily lives and the prosperity of the communities we live in. Their roles include yielding scientific knowledge, discovering breakthrough ideas, fostering innovations, seeding new companies and creating jobs and new streams of personnel and corporate income (Nik Safiah Nik Ismail, 2010). With these, employers expect education institutions to produce graduates with employability skills required by the market without additional training from the industry. Higher Education has an important role to play in producing human capital to meet the challenges of our globalized world. Being cognizant of this the Malaysian government has identified soft skills to be critical skills in the current global job market especially in an era of information and technology boom (Ministry of Higher Education Malaysia 2006). These soft skills are leadership skills, thinking and problem solving skills, life long learning, entrepreneurship skills, professional ethic, team work skills and communication skills. The Ministry of Higher Education (MOHE) has developed a modal to be the reference for public universities to design a program to encompass the criteria it has stipulated.



Source: MOHE 2006.



This model was formulated with the vision to produce quality graduates through a holistic approach. It combines formal and informal teaching and learning activities (curriculum and non-curriculum based), support program (academic and non-academic focus) and on-campus residential and conducive campus environment.

### 1.5 Formulation Of Explicit Learning Outcomes For Soft Skills Competencies

The ministry of Higher Education, Malaysia strongly believes that the quality of the higher education institutions is ultimately assessed by the ability of their graduates to carry out their expected roles and responsibilities in society. Accordingly, this requires a clear definition of the competencies that graduates are expected to achieve at the end of the programme of study. The attributes of the student graduating from a programme of learning is known as learning outcomes. They can be described as statements identifying that which someone successfully completing the programme can do and therefore they must be students focused and contain an action verb (<http://www.fom.sk.med.ic.ac.uk>). Learning outcomes are written in terms of student attainment of knowledge, skills and attitude rather than in terms of what is taught. The use of action verbs which must be observable and measurable is to enable students to achieve those outcomes.

The Malaysian Qualifications Framework (MQF) mentioned earlier, identifies eight competencies which must be included in every programme of study, these include:

1. Knowledge of discipline areas.
2. Practical skills
3. Social skills and responsibilities
4. Values, attitudes and professionalism
5. Communication, leadership and team skills
6. Problem solving and scientific skills
7. Management and entrepreneurial skills
8. Information management and lifelong learning skills

(Ministry of Higher Learning Education 2005)

The eight competencies will be expressed in the form of learning outcomes which will become the bases for determining student learning time (SLT) defined as the total time required by students in order to achieve the specified learning outcomes. Total time includes lectures, tutorials, practical sessions (lab, industry, clinical setting), research activities, visits and related activities, co-curriculum, private study and preparation for examinations. The MQF has

intentionally expressed the eight competencies to reflect that while knowledge, practical skills, social responsibilities and professionalism and ethics are discipline specific, skills in communication and team capabilities, lifelong learning and information management, critical thinking and scientific approach and entrepreneurial and management skills, are universal skills that pervade the entire programme of studies which must be mastered by all students, irrespective of what programme they registered in. These four domain, are those that determine both individual's personal and social competence which fall into what (Laurillard, D, 2002) describes as "the softer domain"- those crucial set of emotional competencies which are "increasing for excellence in every job and in every part of the world.

The soft skills competencies that need to be made explicit in the learning outcomes could be put together into two clusters:

1. Personal competence/self mastery cluster to include: accurate self assessment, self-confidence, proactiveness, time management, commitment-all of which would contribute to the development of personal sense of responsibility and accountability.
2. Social competence/interpersonal cluster to include: communication including negotiation and language skills, problem solving skills, leadership, team capabilities and empathy- all of which would contribute to how well we handle relationship with others.

It is to be understood that each programme of study would adopt a profile of strengths within the two clusters of soft skills competencies that are relevant to the interest of each program as shown below:

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|                                       |   |   |                  |
|---------------------------------------|---|---|------------------|
|                                       | Knowledge of discipline areas             |   |                  |
| Values, attitudes and professionalism | Communication, leadership and team skills | Problem solving and scientific skills               | Practical skills |
|                                       | Management and entrepreneurial skills     | Information management and lifelong learning skills |                  |
|                                       | Social skills and responsibilities        |   |                  |

Learning outcomes domain

Source: Malaysian Qualification Agency 2006

## 1.6 Implementation of Soft Skills Workshop at UMP

The Soft Skills Program had started eight years ago based on the ideas resulting from the UMP-Industry Seminar. Among the elements voiced from the seminar are team working skills, communication skills, leadership skills, continuous learning, and positives values. In addition the industry also identified several critical skills that graduates must acquire such as leadership skills, effectiveness of time management, problem solving skills, team working, creative thinking, innovativeness, critical thinking, communication skills and socialization skills (Imaduddin Hj Abidin et al., 2006, (Ranjit Singh Malhi, 2006), (Mohabatul Zaman Sns Bukhari, 2005). Hence, based on the module of Soft Skills Development for Higher Learning Institutions in Malaysia (MOHE, 2006), the Soft Skills Expert Group at the Centre for Modern Languages & Human Sciences, UMP took the initiative in organizing the *Soft Skills 2 Workshop* for final year students before they set out for their industrial training. This compulsory course was set up as a curriculum at Institutions of Higher Learning (IPTA) level. This paper promotes the positive perspective about the necessity of implementing the Soft Skills workshop for final year Engineering students. This paper will also enhance the expectation that can generate which have positive expect that can forge the links with the university-industry and government in order to produce proficient and well-competent graduates in academic field and career path development.

Briefly, Soft Skills Program at UMP emphasizes on the following aspects: (a) to give understanding about the concept and its implementation of programs; (b) to execute the Soft Skills training programs scheduled; and (c) to create and inculcate learning surrounding which can help students to practice soft skills in their daily life. Conceptually, this Soft Skills Program is an integrated program constructed to develop students' behavior and attitude as well as their inner side that will drive them in their career life. The program is based on the five core elements, which are Positive Values, Team working, Learning Capabilities, Communication Skills and Leadership to achieve UMP's vision to be "*a world class competency-based technical university*". These elements have been chosen as core elements because all of them are the most important elements in Soft Skills.

In order to ensure the effectiveness of this program, UMP has made Soft Skills as a university compulsory subject. Soft Skills 1 (UHS1011) and Soft Skills 2 (UHS2011) have been allocated one credit for each subject. In this paper, we will focus on the second subject (Soft Skills 2@UHS2011) (Haslinda Hashim, 2005) The rationale of this program is to give basic exposure to the students about Soft Skills, which are required to thrive in the industry. This workshop also emphasizes on the real needs and implementation of soft skills in the industry. Upon the completion of this workshop, student will be able:

- to understand the importance of Soft Skills concept in the industry.
- to understand the implementation process of Soft Skills in the industry.

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c) to implement the Soft Skills in the industry.

The eligibility to register for this subject is the students must be a 5<sup>th</sup> semester student for Diploma Program and 7<sup>th</sup> semester student for Degree Program. The students must attend all the sessions as scheduled for them to get "Hadir Lulus (HL)" Grade.

UMP believes in benefits of Smart Partnership. Due to that, 14 speakers are from UMP itself while five speakers are the experts specially invited from the nearby industries. Among the internal speakers, nine speakers are from The Centre for Modern Languages & Human Sciences (PBMSK), four speakers are from The Centre for Technology Management (PPT) and one speaker is from the administrative office. All these speakers come from various educational backgrounds, with a variety of expertise and wide exposure of Soft Skills. There are five external expert speakers which are come from different industrial organization; both in national and multi national company. The details background of the speakers are as follows: A General Manager of VacuumSchumelze, Pekan, Pahang (German Company); A Head of Collection Department, Bumiputera Commerce Berhad, Kuala Lumpur; A Senior Manager of MTBE, Gebeng, Kuantan (Subsidiary Company of Petronas); A Production Manager, B.I Technologies, Kuantan, Pahang and finally an Occupational, Safety and Health Manager, Felda Proctor & Gamble, (Joint venture company between Felda and P&G) Gebeng, Kuantan, Pahang.

There are 12 different areas, which are covered throughout the mini seminar format class. The areas are as follows: The Conflict Management, Decision Making Skills, Coaching & Mentoring Skills, Problem Solving Skills, Emotional Intelligence, Spiritual Intelligence, Ethics In Engineering (Engineering Ethics), Social Skills, Negotiation Skills, Technopreneurship, Change Management, and Supervisory Skills.

## 2. PROBLEM STATEMENTS

Malaysia experienced an increase in employment rare after the 1998 East Asia financial crisis. The unemployment problem was more acute among local graduates and the trend is persistent. Bank Negara Malaysia reported that there are 45,400 unemployed graduates or 0.1 percent of the total unemployed at the end of year 2002 are graduates. The figure accounted for 0.5 percent of the total labor force (Bank Negara Malaysia, 2003). The same phenomenon happened during the economic recession of 1985, reporting about the same number of unemployed graduates. During that time, 94% of the unemployed public universities graduates were Malays. The general picture that emerged was that the unemployed were mostly female, Malays and Art and social sciences major.

The job mismatch between the degree obtained and the market needs or job vacancies available in the market was identified as the factor that contributed to the rising rate

of unemployment among graduates, especially in the Federal Territory. The mismatch issue is prevalent in all job areas, including the critical area of sciences and technology in Malaysia. A study done by (Suryati et al., 2003) found that there is a job mismatch in the Malaysian labor market between the years 1996 to 2000. There was a shortage of labors in the production and agriculture sectors, where profesional, technical and administrative workers were in excess supply. The finding was supported by Bank Negara Malaysia Annual Report 2002 (Bank Negara Malaysia, 2003) through the analysis of Beveridge Curve. The mismatch phenomenon has persisted into 2002. Due to the government efforts in increasing the quality and mobility of workers, there was an indication of structural improvement in the economy. The structural improvement is expected to keep the unemployment rate below the natural level.

In line with that, our country is facing problem of unemployed graduates. Last year Malaysia was stunned by the revelation of over 50,000 graduates unable to find job. Therefore government and educators have to find ways to overcome this problem. In line with that, Higher education has responsibility to its principle stakeholder (students) to equip them with more than a profound knowledge of an academic subject area. Higher education has a responsibility to students that includes encouraging and enabling them develop through their academic study, a range of explicit attributes which allow them to subsequently engage effectively in the world of work. In congruence with the above, Dr T. Chin (Sunday Star 3 April 2005) echoed a similar song when he stated the following with regards to unemployed graduates:

*A key outcome of the recently convened Ninth Malaysian Education Summit is that our graduates lack soft skills.....In the pursuit of an academic or professional qualification, insufficient attention has been given to emotional and spiritual development...*

The study done by Ahmad Zaini (2005) for technical graduates found that 80,000 technical graduates who are still unemployed, and these graduates are largely depend on academic qualifications to get a job but with less non-technical skills of soft skills required by employers. On August 11, 2006 the Ministry of Higher Education has declared about 60,000 graduates are still unemployed. The huge number of unemployed graduates was not a major cause of rapidly changing in a market world but they lack of soft skills and non technical skills. The study done by IPPTN (2004), found the most graduates who were unemployed come from fields such as social sciences, literature, economic, sciences and technical. The unemployment problem largely due to the weakness in non technical skills among graduates themselves. Despite, the Malaysian of Higher Education was provided a number of programs to lift up the skills among students such as Graduates Employability, Satyam, Infosys 3P,

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Apprenticeship, Internship etc. Beside the dialog between industry, whereas student will be allowed to secure the job early before graduating. Preliminary investigation indicated that employers see a gap between graduates preparedness and market requirements. In order to keep up the graduates survive in the arena of employment today they must have employability skills for continuous development of new skills and adaptation to changes (Australian Council for Educational Research 2001; Kearns 2001). Therefore this study aims to identify the importance of mastery soft skills through workshop for final year students.

### 3. OBJECTIVE AND SCOPE OF PAPER

This paper derived from the starting point of 12 pillars of our Prime Minister, YAB Datuk Seri Abdullah Ahmad Badawi that addressed that 12 pillars in his presidential address at the opening of the 57<sup>th</sup> UMNO General Assembly. In his third pillar which emphasizes on the development of human capital; via quality holistic and integrated education program to equip Malaysians to face the globalised world; supported by the established of a creative and innovative society that will become a component of a population that possesses a first-class culture.

Additionally, from the demand of new era of globalization today, employers are looking for graduate who are not only highly skilled and well qualified, but are able to adapt flexible, apply and transfer their knowledge and skills to different contexts, as well as to respond quickly, intelligently, and creatively. According to former Minister of Higher Education, (Dato' Dr. Haji Shafie Mohd Salleh, 2005) addressed that university program must take into account that the training and education needs of graduates in order to prepare them for knowledge society and enhance their employability in the labor market. The students need to develop their employability by possessing core work skills, knowledge, and industry based and professional competencies that facilitate their transition into working surroundings. Thus, the well-rounded curriculum and comprehensive modules must be transformed to meet the demanding challenges of the modern job market (Chapman, 2006), (Bernama, 2006)..

Therefore, this study specifically aims to answer the following objectives:

- a) to identify the effectiveness of the program contents in terms of the ability of the program that meets the needs of the students (before their Industrial Training session), ability to increase students understanding and ability to

apply the Soft Skills concept in their routine and during the workplace surroundings.

- b) to identify the standards of Soft Skills program and its contents, regarding the modules, materials used, relevancy of given examples, group activities, program schedule, and suitability of venue during the program.
- c) to identify the overall evaluation on performance of facilitators and speakers.

The study focuses on the need of implementing Soft Skills workshop program (UHS 2011) amongst final year Engineering students by describing and assessing the students' evaluation regarding the whole program (objectives of the workshop, course contents, materials, activities, facilitators, schedule and suitability venue).

### 4. METHODOLOGY

#### 4.1 Research design

Descriptive design was used in the present study in order to achieve the objectives. The researcher observes and then describes what was observed. Descriptive design helped to uncover information regarding the chronicles of workshop program amongst the final year students. This study was conducted using survey blueprint at Universiti Malaysia Pahang (UMP) at Pahang Darul Makmur. The questionnaire was distributed to all 549 students during the session. This area was selected because firstly, of its accessibility and convenience to the researcher. Secondly, UMP is an already established settlement, populated mostly by students from various races, program and semesters. Given that college students were of interest in this study, this area seemed highly appropriate. The population for the present study was adolescents attending tertiary education in a university setting particularly, those who stay on campus. Then, a total of 226 final year students out of 549 were selected as subjects by using probability sampling-simple random sampling technique. Table of *Krejcie and Morgan* was used to determine the sample size based on 95% level of significance towards the populations (Sugiyono, 1999), Krejcie et al., 1970)

### 5. RESULTS AND DISCUSSION

#### 5.1. Data Analysis and Discussion

This chapter presents and discusses the results obtained by the questionnaire administered. The analyses were performed using the *Statistical Package for Social Sciences* (SPSS ver.14.0). A total of 226 final year Engineering students were analyzed in descriptive methods of statistical analysis. The descriptive findings shown as followed:-

**Table 1.0 Descriptive data of Gender**

| Gender | Frequency | Percent |
|--------|-----------|---------|
| Male   | 125       | 55.3    |
| Female | 101       | 44.7    |
| Total  | 226       | 100     |



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**Table 2.0 Descriptive data of Faculty**

| Faculty | Frequency | Percent |
|---------|-----------|---------|
| FME     | 40        | 17.7    |
| FCNRE   | 49        | 21.7    |
| FCEE    | 21        | 9.3     |
| FCSSE   | 37        | 16.4    |
| EEEE    | 79        | 35.0    |
| Total   | 226       | 100     |

Table 1 and Table 2 present a summary of the descriptive statistics of the personal characteristics of the respondents. The total number of respondents who took part in the study was 226. There are 125 male (55.3%) and 101 female (44.7%) from the various faculties. There were 40 students (17.7%) from the Faculty of Mechanical Engineering, 49

students (21.7%) from the Faculty of Chemical & Natural Resources Engineering, 21 students (9.3%) from the Faculty of Civil & Environmental Engineering, 37 students (16.4%) from the Faculty of Computer Systems and Software Engineering and lastly 79 students (35%) from the Faculty of Electrical & Electronics Engineering.

**Table 3. Descriptive data of Question 1: “How far are the objectives of this program achieved?”**

| Q1        | Frequency | Percent |
|-----------|-----------|---------|
| Poor      | 1         | 0.4     |
| Moderate  | 29        | 12.8    |
| Good      | 148       | 65.5    |
| Very Good | 48        | 21.2    |
| Total     | 226       | 100     |

Table 3 indicates that there are 48 students (21.2%) said that the objectives of the workshop program are achieved in “Very Good” condition when responding to Question 1, whereas 148 students (65.5%) said in “Good” level, 29 students (12.8%) said in “Moderate” condition and lastly only 1 student (0.4%) said that the objectives of the program is poorly achievable. Therefore, these findings showed that

most of the objectives of the workshop program were achieved and gave a benefit to the students. In addition, it shows the positive and good tendency of the students in accepting and understanding the whole objectives of the workshop program as well as getting involved in this workshop.

**Table 4-1. Descriptive data of Question 2: “How do you evaluate the effectiveness of this program?”**

| Q2a: The contents meet my needs | Frequency | Percent |
|---------------------------------|-----------|---------|
| Poor                            | 1         | 0.4     |
| Moderate                        | 58        | 25.7    |
| Good                            | 133       | 58.8    |
| Very Good                       | 34        | 15.0    |
| Total                           | 226       | 100     |

Table 4-1 indicates that there are 34 students (15.0%) said that the evaluation to the effectiveness of the program is “Very Good” condition when responding to Question 2a, whereas 133 students (58.8%) said in “Good” level, 58 students (25.7%) said in “Moderate” condition and lastly only 1 student (0.4%) said that the effectiveness of the program is poorly achievable. Therefore, these findings showed that the contents of workshop program run

effectively in term of its contents that meets the students’ needs especially for during their Industrial Training preparation. In addition, it shows the contents of the program generally gave a good motivation and positive impact on students’ needs that may be beneficial for their study and future planning that is related to 12 topics of the workshop.

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[www.ijssk.org/ijrss](http://www.ijssk.org/ijrss)**Table 4-2. Descriptive data of Question 2: “How do you evaluate the effectiveness of this program?”.**

| Q2b: The content is related to my studies and this help to increase my understanding of Soft Skills | Frequency | Percent |
|---|-----------|---------|
| Poor  | 3         | 1.3     |
| Moderate  | 43        | 19.0    |
| Good  | 130       | 57.5    |
| Very Good   | 50        | 22.1    |
| Total   | 226       | 100     |

Table 4-2 indicates that there are 50 students (22.1%) said that the evaluation to the effectiveness of the program is “Very Good” condition when responding to Question 2b, whereas 130 students (57.5%) said in “Good” level, 43 students (19.0%) said in “Moderate” condition, and lastly only 3 students (1.3%) said that the effectiveness of the program is poorly achievable. Therefore, these findings

showed that the contents of workshop program in term of its contents that relates to the study of the students and able to increase their understanding of Soft Skills concept and its application. In addition, this feedback indicates that the students already noticed and realized the important and significance of Soft Skills elements and its application for the study and future life.

**Table 4-3. Descriptive data of Question 2: “How do you evaluate the effectiveness of this program?”.**

| Q2c: I can apply whatever I learnt in this program in my daily life and later in my work | Frequency | Percent |
|--|-----------|---------|
| Very Poor  | 2         | 0.9     |
| Poor   | 1         | 0.4     |
| Moderate   | 37        | 16.4    |
| Good   | 119       | 52.7    |
| Very Good  | 67        | 29.6    |
| Total  | 226       | 100     |

Table 4-3 illustrates that there are 67 students (29.6%) said that the evaluation to the effectiveness of the program is “Very Good” condition when responding to Question 2c, whereas 119 students (52.7%) said in “Good” condition, 37 students (16.4%) said in “Moderate” condition, 1 students (0.4%) and lastly only 2 students (0.9%) said that the

effectiveness of the program is very poor condition. Therefore, these findings showed that the contents of workshop program run effectively in term of its contents that meets the students needs especially for during their Industrial training preparation. In addition, the contents of the program can develop the student potentials when they are able to apply the Soft Skills elements.

**Table 5. Descriptive data of Question 3: “How do you evaluate the materials of this program?”.**

| Q3:       | Frequency | Percent |
|-----------|-----------|---------|
| Poor      | 3         | 1.3     |
| Moderate  | 72        | 31.9    |
| Good      | 119       | 52.7    |
| Very Good | 32        | 14.2    |
| Total     | 226       | 100     |

Table 5 illustrates that there are 32 students (14.2%) said that the evaluation of materials preparation is “Very Good” condition when responding to Question 3, whereas 119 students (52.7%) said in “Good” condition, 72 students (31.9%) said in “Moderate” condition, and lastly only 3

students (1.3%) said that the preparation of the materials is poor condition. Therefore, these findings showed that the materials such as file, notes, LCD, and other materials of workshop program in positive and good condition.

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[www.ijssk.org/ijrss](http://www.ijssk.org/ijrss)**Table 6-1. Descriptive data of Question 4: “How do you evaluate the contents of the program?”.**

| Q4a: Modules | Frequency | Percent |
|--------------|-----------|---------|
| Poor         | 2         | 0.9     |
| Moderate     | 61        | 27.0    |
| Good         | 135       | 59.7    |
| Very Good    | 28        | 12.4    |
| Total        | 226       | 100     |

Table 6-1 illustrates that there are 28 students (12.4%) said that the evaluation of the contents of the program is “Very Good” condition when responding to Question 4a in term of modules development, whereas most of students (135;59.7%) said in “Good” condition, 61 students (16.4%) said the contents is “Moderate”, and lastly only 2 students (0.9%) said that the modules is poor condition. Therefore,

these findings showed that most of the implemented modules have the positive tendency in assisting the students to develop and apply the Soft Skills elements in their life and later in their work. The module development is discussed among the facilitators and speakers in order to determine the suitable and relevant modules to the students.

**Table 6-2. Descriptive data of Question 4: “How do you evaluate the contents of the program?”.**

| Q4b: The examples given are useful and easy to understand | Frequency | Percent |
|---|-----------|---------|
| Poor  | 2         | 0.9     |
| Moderate  | 38        | 16.8    |
| Good  | 129       | 57.1    |
| Very Good   | 57        | 25.2    |
| Total   | 226       | 100     |

Table 6-2 illustrates that there are 57 students (25.2%) said that the example given during the workshop are very useful and easy to understand, whereas 129 students (57.1%) said in the example given is “Good” condition, 38 students

(16.8%) said the given example is “Moderate”, and lastly only 2 students (0.9%) said that the given example is poor condition. Therefore, these findings showed that most of the given examples are useful and easy to understand by the students in order to understand the real surroundings of the industry.

**Table 6-3. Descriptive data of Question 4: “How do you evaluate the contents of the program?”.**

| Q4c: The examples given are relevant to industries | Frequency | Percent |
|--|-----------|---------|
| Poor   | 2         | 0.9     |
| Moderate   | 42        | 18.6    |
| Good   | 133       | 58.8    |
| Very Good  | 49        | 21.7    |
| Total  | 226       | 100     |

Table 6-3 illustrates that there are 49 students (21.7%) said that the example given during the workshop are “Very Good” in terms of its relevancy and practicality to the industrial context, whereas 133 students (58.8%) said the example given is “Good” condition, 42 students (18.6%) said the given example is “Moderate”, and lastly only 2

students (0.9%) said that the relevancy and practicality of given example is poor condition. Therefore, these findings showed that most of the given examples are relevant and practical to the industrial environment. It is because the concept of the KUKTEM Soft Skills workshop is the implementation of the combination between the theoretical and practical approach regarding the current needs of the industry and market.

**Table 6-4. Descriptive data of Question 4: “How do you evaluate the contents of the program?”.**

| Q4d: Activities carried out are adequate | Frequency | Percent |
|--|-----------|---------|
| Poor                                     | 4         | 1.8     |
| Moderate                                 | 37        | 16.4    |
| Good                                     | 139       | 61.5    |
| Very Good                                | 46        | 20.4    |

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|       |     |     |
|-------|-----|-----|
| Total | 226 | 100 |
|-------|-----|-----|

Table 6-4 illustrates that there are 46 students (20.4%) said that the activities which carried out by the facilitators/speakers is adequate is "Very Good" condition, whereas 139 students (61.5%) said the activities is in "Good" condition, 37 students (16.4%) said the given example is "Moderate", and lastly only 4 students (1.8%) said that the activities is poorly adequate to the students needs. The approach of the workshop is to try to combine

between the theoretical and practical approach. The contents of activities that carried out during the workshop are the talk session on the particular topics, which come out with group activities such games, case study and finally the debriefing session which refers to the extraction of lesson learned and conclusion from the given talk and group activities and others.

**Table 7. Descriptive data of Question 5:**  
**"Overall evaluation of facilitators".**

| Q5        | Frequency | Percent |
|-----------|-----------|---------|
| Poor      | 11        | 4.9     |
| Moderate  | 78        | 34.5    |
| Good      | 115       | 50.9    |
| Very Good | 22        | 9.7     |
| Total     | 226       | 100     |

Table 7 illustrates that there are 22 students (9.7%) said that the overall evaluation of the facilitators and speakers is "Very Good" condition, whereas 115 students (50.9%) said in "Good" condition, 78 students (34.5%) said the facilitators' performance is "Moderate", and lastly only 11 students (4.9%) said that the facilitators involvement is poor condition. Therefore, these findings showed that most of the

facilitators are able to play their roles in presenting and facilitating the target audiences according to the developed modules. This feedback are reflects to the demographic factors of the speakers and facilitator in terms of their working experiences, designations, involved in national and multinational company and other relevant background that related to real situation in industry.

**Table 8-1. Descriptive data of Question 6: "How do you evaluate this program based on these criteria?".**

| Q6a: Program schedule | Frequency | Percent |
|-----------------------|-----------|---------|
| Very Poor             | 9         | 4.0     |
| Poor                  | 25        | 11.1    |
| Moderate              | 74        | 32.7    |
| Good                  | 101       | 44.7    |
| Very Good             | 17        | 7.5     |
| Total                 | 226       | 100     |

Table 8-1 illustrates that there are 17 students (7.5%) said that the technical preparation and program schedule is "Very Good" condition, whereas 115 students (44.7%) said the schedule is "Good" condition, 78 students (32.7%) said the schedule is "Moderate", and 12 students (11.1%) said the

schedule is poor and lastly 9 students (4.0%) said that the program schedule is very poor condition. Therefore, these findings showed that most of the facilitators are able to play their roles in presenting and facilitating the target audiences according to the developed modules.

**Table 8-2. Descriptive data of Question 6: "How do you evaluate this program based on these criteria?".**

| Q6b: Suitability of venue | Frequency | Percent |
|---------------------------|-----------|---------|
| Very Poor                 | 4         | 1.8     |
| Poor                      | 12        | 5.3     |
| Moderate                  | 78        | 34.5    |
| Good                      | 115       | 50.9    |
| Very Good                 | 17        | 7.5     |
| Total                     | 226       | 100     |

Table 8-2 illustrates that there are 17 students (7.5%) said that the technical preparation and suitability of venue is

"Very Good" condition, whereas 115 students (50.9%) said the venue is "Good" condition, 78 students (34.5%) said the



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venue is “Moderate”, 12 students (5.3%) said the venue selection is poor and lastly 4 students (1.8%) said that suitability of venue is in very poor condition. Therefore, these findings showed that most of the facilitators are able to play their roles in presenting and facilitating the target audiences according to the developed modules.

Based on the analysis of the findings, generally it was found that the majority of the respondents were agreed to the implementation process of the Soft Skills workshop. Most of them (more than 50%) stated that the “Very Good” and “Good” results to all question asked. In a nutshell, this finding reflects to the previous statements about the importance of implementing Soft Skills toward the students’ personal growth, career development, and during the workplace environment (Coplin, B. 2004; Rebecca, 1999; Imaduddin Hj Abidin, et.al, 2006; Ranjit Singh Malhi, 2006; Mohabatul Zaman, 2005; Haslinda@Robita Hashim, et.al, 2005; Shafie Mohd Salleh, 2005; Bernama, 2006; Chapman, K, 2006).

## 6. CONCLUSION

Based on the analysis of the findings, which has been discussed, generally it was found that the majority of the respondents were agreed to the implementation process of the Soft Skills workshop for final year Engineering students. Most of the respondents found it highly beneficial, for both personal growth and able to improve employability skills. Although the overall research findings shown the satisfactory results, there are still a room for improvement in term of program management. In order to produce graduates with towering personality, exemplary qualities and highly competent in Soft Skills core benchmarks, it is important to consider some various factors. The evaluation of effectiveness of the workshop program is influenced by the variety of conditions and requirements such as the set up the attainable objectives, the contents of program modules that meets the students need, able to increase the students understanding, able to use and apply the given knowledge, able to apply both theoretical and practical frameworks in modules development, quality materials, as well as smart partnership between university and conglomerate (including facilitators and speakers) to run and organize the program. Additionally, this study suggested the significance of implementing the training program as a comprehensive and integrated approach in fulfilling the needs of final year students before they are going for their Industrial Training as well as stakeholders and governing agencies/bodies in order to produce proficient, expert and well-rounded graduates in academic, technical skills and non-technical skills.

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